

What is claimed is:

1. An arrangement for providing a communication interface between a hybrid fiber coaxial (HFC) network and an in-home communications network, the arrangement comprising

a home networking gateway disposed to communicate with the HFC network and couple communications to the in-home network, the home networking gateway including a translator for mapping between HFC-based communication protocols and in-home network-based protocols, said home networking gateway for performing device discovery and network management of said in-home network;

a device database coupled to said home networking gateway and comprising configuration files associated with various in-home telecommunication devices;

a service level agreement database coupled to said home networking gateway and comprising a listing of authorized services for the in-home network, class of service information and quality of service information.

2. The arrangement as defined in claim 1 wherein the home networking gateway comprises

a home network interface connection module for supporting a pre-defined in-home communication protocol;

a voice telephony service connection module, coupled to the home network interface connection module, for providing communication with in-home telephony devices;

a data service connection module for providing communication with in-home data-based devices;

a cable modem connection module for providing communication with the HFC network;

a communication bus coupled to each of the voice telephone service connection module, the data service connection module and the cable modem connection module for enabling communication between each module;

15 a translation processor coupled to the communication bus for mapping between
16 communication protocols used by the HFC network and protocols used by the in-home
17 network and providing translated protocols with each transaction.

1 3. The arrangement as defined in claim 2 wherein the voice telephony service
2 connection module comprises a subscriber line interface circuit (SLIC) connection.

1 4. The arrangement as defined in claim 2 wherein the data service connection
2 module comprises an Ethernet connection.

1 5. The arrangement as defined in claim 2 wherein the in-home network protocol
2 is a wireless service protocol.

1 6. The arrangement as defined in claim 5 wherein the wireless protocol comprises
2 the Shared Wireless Access Protocol (SWAP).

1 7. The arrangement as defined in claim 2 wherein the in-home network protocol
2 comprises the Home Phoneline Network Alliance (HomePNA) protocol.

1 8. The arrangement as defined in claim 2 wherein the in-home network protocol
2 comprises the IEEE 1394 FireWire protocol.

1 9. The arrangement as defined in claim 2 wherein the home networking gateway
2 further comprises an internal battery power supply.

1 10. The arrangement as defined by claim 2 wherein the home networking
2 gateway further comprises a digital signal processor (DSP) coupled between the voice
3 connection module and the in-home network interface module to distributed voice signals
4 from said voice communication module into the in-home network through said in-home
5 network interface.

1 11. A method of providing network management for an in-home network of
2 communication devices coupled to an external HFC network through a home networking
3 gateway interface, the method comprising the steps of:

4 performing, using the home networking gateway, a device discovery process to
5 determine the plurality of devices and services existing in the in-home network; and
6 reporting the discovered information to an inventory management system.

1 12. The method of claim 11 for further providing a service requested by an in-
2 home device and the method comprising the additional steps of:

3 recognizing at the home networking gateway a service request from an in-home
network device;

obtaining authorization for said service from a network management system;
upon authorization, requesting said service from a call management system; and
providing said service to the request device.

13. The method of claim 11 wherein the method is further utilized for bandwidth
allocation and comprises the additional steps of

recognizing at the home networking gateway a device request for bandwidth;
obtaining authorization bandwidth from a network management system;
5 upon authorization, requesting bandwidth from a cable modem termination
6 system (CMTS);
7 allocating the requested bandwidth on the HFC network; and
8 allocating, through the home networking gateway, the requested bandwidth on the
9 in-home network to the requesting device.
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